Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-38. (cancelled)

39. (currently amended) A laser-based method of high resolution marking of printed circuit boards (PCBs), chip scale packages (CSPs), microball grid arrays (u-BGAs) or similar articles, or marking pre-determined locations related to the articles, the articles being disposed on a surface, mounted on a substrate, constrained within pockets of a compartmentalized tray, secured to a pallet, or otherwise supported by a surface at a laser marking station, the marking to occur with a focused laser marking beam at a laser marking beam location within a marking field, the method comprising:

receiving articles at the marking station;

imaging one of the articles, the imaged article having a circuit feature offset from the laser marking beam location and suitable for detection with an optical sensor to obtain an image;

locating the feature of the imaged article in the image to obtain a feature location;

calculating an offset to relate the feature location to [[a]] the marking beam location;

generating a displacement control signal based on the offset;

setting a laser marking beam location based on the displacement control signal so that the marking beam location substantially coincides with the marking location within a marking field, the marking field being substantially smaller than a field that covers all the articles supported at the marking station; and

generating, directing, and focusing a laser beam after the step of setting to produce a focused laser marking beam so that the marking beam forms at least one mark at the

marking location within the marking field wherein the step of imaging is carried out with an optical sensor located disjoint from an optical axis of the laser marking beam.

40. (original) The method of claim 39, further comprising accepting input data representing marking locations and marking content.

41. (original) The method of claim 39, wherein the marking location is within a region proximal to circuitry of the article, and marking is carried out without a substantial risk of damage to the circuitry.

42. (original) The method of claim 41, wherein the region is a portion of a substrate, package, or semiconductor die.

43. (original) The method of claim 39, wherein the step of calculating includes estimating at least one of a translation and a rotation.

44. (original) The method of claim 39, wherein resolution of the marking is within a range of about 1:3000 to 1:6000 of the marking field.

45. (original) The method of claim 39, wherein the articles are printed circuit boards (PCBs), each printed circuit board being a portion of a multi-up.

46. (original) The method of claim 39, wherein the articles are chip scale package (CSPs), or microball grid arrays (u-BGAs).

47. (original) The method of claim 39, wherein at least one of the steps of directing and focusing includes producing a marking pattern with a plurality of focused spots, each spot having at size of about 25-50 microns.

48. (original) The method of claim 39, wherein the field that covers all the supported articles has a dimension from about 200 mm to about 500 mm.

49. (original) The method of claim 39, wherein the marking field has a dimension of about 100 mm.

50. (original) The method of claim 39, wherein the feature is a circuit trace or interconnect.

51. (original) The method of claim 50, wherein the interconnect is a grid array element.

52. (original) The method of claim 39, further comprising providing a laser marking head at the marking station and automatically adjusting height of the laser marking head relative to the article.

53. (original) The method of claim 40, wherein the step of directing comprises controllably steering the focused laser marking beams along two substantially orthogonal intersecting axes at the marking station based on the input data.

54. (original) The method of claim 53, wherein the step of setting comprises displacing two substantially orthogonal axes in first and second directions, the second direction being substantially orthogonal to the first direction at the marking station.

55. (original) The method of claim 54, wherein the step of controllably steering is carried out using first and second galvanometer-based scanners for the first and second directions, respectively.

56.-67. (cancelled)